



2828

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No. : 09/557,289  
Applicant : JEWELL, JACK.  
Filed : APRIL 25, 2000  
Title : CONDUCTIVE ELEMENT WITH LATERAL OXIDATION BARRIER

Art Unit : 2828  
Examiner : DAVIE, JAMES W.

Atty Docket No. : PICO-0029-1

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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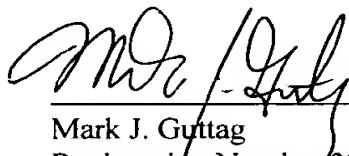
**LETTER**

Sir:

The below-identified communication(s) is (are) submitted in the above-captioned application or proceeding:

- ☒ Request for Reconsideration
- ☒ The Commissioner is hereby authorized to charge payment of any fees associated with this communication, including fees under 37 C.F.R. §§ 1.16 and 1.17 or credit any overpayment to **Deposit Account Number 10-0233, PICO-0029-1.**

Respectfully submitted,

  
Mark J. Guttag  
Registration Number 33,057

**JAGTIANI + GUTTAG**  
Democracy Square Business Center  
10363-A Democracy Lane  
Fairfax, Virginia 22030

(703) 591-2664

October 23, 2003



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REQUEST FOR RECONSIDERATION

Sir:

The present request for reconsideration is in response to the Office Action of July 23, 2003, the period of response to which is set to expire on October 23, 2003.

Claims 57-77 are rejected under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed. For convenience, in the discussion below, all citations are to U.S. Patent No. 5,719,891 of which the present application is a divisional application and, which, therefore, has the same originally filed specification as the present application.

At page 2 the Office Action states that the "surrounded by" limitation of lines 9-10 of claim 57 fails to find support in the original specification. However, support for claim 57's feature of "a first unchanged region of said first current blocking layer surrounded by a first changed region of said first current blocking layer" is found in the specification at col. 4, line 64 to col. 5, line 8 and at col. 5, lines 48-67 and in the drawings in Figures 1C, 1E, and 1F and at col. 5, lines 9-47 and col. 7, lines 15-61 and in Figures 5A-5F. As claimed in claim 57, the first changed region is electrically insulative and the first unchanged region is electrically conductive. The specification describes a current blocking layer (the combination of cap layer 21 and oxidizing, i.e. oxidizable layer 12) having a changed region (first non-conductive region 16) and an unchanged region (second conductive region 20), see col. 4, line 64 to col. 5, line 8. As can be seen in the

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embodiments illustrated in Figures 1C, 1E and 1F, the changed region (first non-conductive region 16) surrounds the unchanged region (second conductive region 20). The specification also describes a blocking layer (oxidizing layer 24) having a changed region (oxidized portion 28) and an unchanged region (portion 32), see col. 5, lines 9-16. The changed region (oxidized portion 28) is described as being electrically resistive and the unchanged region (portion 32) is described as being electrically conductive, see col. 5, lines 29-31. Figures 5A-5F show embodiments of the claimed invention including several layers in which changed region (oxidized portion 28) surrounds unchanged region (portion 32) and col. 7, lines 17-18, 25-26, 33-34, 41-42, 49-50, and 58-59 describe portion 32 being surrounded by oxidized portion 28. For the above reasons, the “surrounded by” limitation of lines 9-10 of claim 57 is supported in original specification and drawings and the rejection of claim 57 under 35 U.S.C. § 112, first paragraph should be withdrawn.

The Office Action cites no objectionable language in claims 58, 60, 62, 63, 64, 65, 66, and 67, so it appears that claims 58, 60, 62, 63, 64, 65, 66, and 67 have only been rejected under 35 U.S.C. § 112, first paragraph, because claims 58, 60, 62, 63, 64, 65, 66, and 67 are dependent either directly or indirectly on claim 57. Therefore, because the rejection of claim 57 should be withdrawn, the rejection of claims 58, 60, 62, 63, 64, 65, 66, and 67 should also be withdrawn for the reasons discussed above with respect to claim 57.

At page 2 the Office Action states that the “surrounded by” limitation of lines 5-6 of claim 59 fails to find support in the original specification. However, support for claim 59’s feature of “a second unchanged region of said second current blocking layer surrounded by a second changed region of said first current blocking layer” is found in the specification at col. 4, line 64 to col. 5, line 8 and at col. 5, lines 48-67 and in the drawings in Figures 1C, 1E, and 1F and at col. 5, lines 9-47 and col. 7, lines 15-61 and in Figures 5A-5F. As claimed in claim 59, the second changed region is electrically insulative and the second unchanged region is electrically conductive. The specification describes a current blocking layer (the combination of cap layer 21 and oxidizing, i.e. oxidizable layer 12) having a changed region (first non-conductive region 16) and an unchanged region (second conductive region 20), see col. 4, line 64 to col. 5, line 8. As can be seen in the

embodiments illustrated in Figures 1C, 1E and 1F, the changed region (first non-conductive region 16) surrounds the unchanged region (second conductive region 20). The specification also describes a blocking layer (oxidizing layer 24) having a changed region (oxidized portion 28) and an unchanged region (portion 32), see col. 5, lines 9-16. The changed region (oxidized portion 28) is described as being electrically resistive and the unchanged region (portion 32) is described as being electrically conductive, see col. 5, lines 29-31. Figures 5A-5F show embodiments of the claimed invention including several blocking layers in which a changed region (oxidized portion 28) surrounds an unchanged region (portion 32) and col. 7, lines 17-18, 25-26, 33-34, 41-42, 49-50, and 58-59 describe portion 32 being surrounded by oxidized portion 28. For the above reasons, the “surrounded by” limitation of lines 5-6 of claim 59 is supported in original specification and drawings and the rejection of claim 59 under 35 U.S.C. § 112, first paragraph should be withdrawn.

The Office Action cites no objectionable language in claims 61 and 68, so it appears that claims 61 and 68 have only been rejected under 35 U.S.C. § 112, first paragraph, because claims 61 and 68 are dependent directly on claim 59 and indirectly on claim 57. Therefore, because the rejections of claim 57 and 59 should be withdrawn, the rejection of claims 61 and 68 should also be withdrawn for the reasons discussed above with respect to claims 57 and 59.

At page 2 the Office Action states that the “surrounded by” limitations of lines 12-13 and lines 18-19 of claim 69 fail to find support in the original specification. However, support for claim 69’s feature of “a first nonoxidized region of said first current blocking layer surrounded by a second oxidized region of said first current blocking layer” and “a second nonoxidized region of said second current blocking layer surrounded by a second oxidized region of said second current blocking layer” is found in the specification at col. 4, line 64 to col. 5, line 8 and at col. 5, lines 48-67 and in the drawings in Figures 1C, 1E, and 1F and at col. 5, lines 9-47 and col. 7, lines 15-61 and in Figures 5A-5F. As claimed in claim 69, the first and second oxidized regions are electrically insulative and the first and second nonoxidized regions are electrically conductive. The specification describes a current blocking layer (the combination of cap layer 21 and oxidizing, i.e. oxidizable layer

12) having an oxidized region (first non-conductive region 16) and an nonoxidized region (second conductive region 20), see col. 4, line 64 to col. 5, line 8. As can be seen in the embodiments illustrated in Figures 1C, 1E and 1F, the oxidized region (first non-conductive region 16) surrounds the nonoxidized region (second conductive region 20). The specification also describes a blocking layer (oxidizing layer 24) having an oxidized region (oxidized portion 28) and a nonoxidized region (portion 32), see col. 5, lines 9-16. The oxidized region (oxidized portion 28) is described as being electrically resistive and the nonoxidized region (portion 32) is described as being electrically conductive, see col. 5, lines 29-31. Figures 5A-5F show embodiments of the claimed invention including several blocking layers in which a oxidized region (oxidized portion 28) surrounds a nonoxidized region (portion 32) and col. 7, lines 17-18, 25-26, 33-34, 41-42, 49-50, and 58-59 describe portion 32 being surrounded by oxidized portion 28. For the above reasons, the “surrounded by” limitations of lines 12-13 and lines 18-19 of claim 69 are supported in original specification and drawings and the rejection of claim 69 under 35 U.S.C. § 112, first paragraph should be withdrawn.

The Office Action cites no objectionable language in claims 70-73, so it appears that claims 70-73 have only been rejected under 35 U.S.C. § 112, first paragraph, because claims 70-73 are dependent either directly or indirectly on claim 69. Therefore, because the rejection of claim 69 should be withdrawn, the rejection of claims 70-73 should also be withdrawn for the reasons discussed above with respect to claim 69.

At pages 2-3 the Office Action states that the “surrounded by” limitations of lines 12-13 and lines 18-19 of claim 74 fail to find support in the original specification. However, support for claim 74’s feature of “a first nonoxidized region of said first current blocking layer surrounded by a second oxidized region of said first current blocking layer” and “a second nonoxidized region of said second current blocking layer surrounded by a second oxidized region of said second current blocking layer” is found in the specification at col. 4, line 64 to col. 5, line 8 and at col. 5, lines 48-67 and in the drawings in Figures 1C, 1E, and 1F and at col. 5, lines 9-47 and col. 7, lines 15-61 and in Figures 5A-5F. As claimed in claim 74, the first and second oxidized regions are electrically insulative and the first and second nonoxidized regions are electrically conductive. The specification

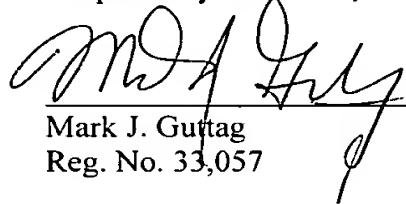
describes a current blocking layer (the combination of cap layer 21 and oxidizing, i.e. oxidizable layer 12) having an oxidized region (first non-conductive region 16) and a nonoxidized region (second conductive region 20), see col. 4, line 64 to col. 5, line 8. As can be seen in the embodiments illustrated in Figures 1C, 1E and 1F, the oxidized region (first non-conductive region 16) surrounds the nonoxidized region (conductive region 20). The specification also describes a blocking layer (oxidizing layer 24) having an oxidized region (oxidized portion 28) and a nonoxidized region (portion 32), see col. 5, lines 9-16. The oxidized region (oxidized portion 28) is described as being electrically resistive and the nonoxidized region (portion 32) is described as being electrically conductive, see col. 5, lines 29-31. Figures 5A-5F show embodiments of the claimed invention including several blocking layers in which a oxidized region (oxidized portion 28) surrounds a nonoxidized region (portion 32) and col. 7, lines 17-18, 25-26, 33-34, 41-42, 49-50, and 58-59 describe interdiffused portion 32 being surrounded by oxidized portion 28. For the above reasons, the "surrounded by" limitations of lines 12-13 and lines 18-19 of claim 74 are supported in original specification and drawings and the rejection of claim 74 under 35 U.S.C. § 112, first paragraph should be withdrawn.

The Office Action cites no objectionable language in claims 75 and 76, so it appears that claims 75-77 have only been rejected under 35 U.S.C. § 112, first paragraph, because claims 75-77 are dependent on claim 74. Therefore, because the rejection of claim 74 should be withdrawn, the rejection of claims 75-77 should also be withdrawn for the reasons discussed above with respect to claim 74.

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Mark J. Guttag at 703-591-2664, Ext. 2006.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,



Mark J. Guttag  
Reg. No. 33,057

**JAGTIANI + GUTTAG**  
Democracy Square Business Center  
10363-A Democracy Lane  
Fairfax, Virginia 22030  
703-591-2664

October 23, 2003